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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,972	02/08/2005	Eiji Kadouchi	43890-715	1562

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EXAMINER	
BERHANU, SAMUEL	
ART UNIT	**PAPER NUMBER**
2838	

MAIL DATE	DELIVERY MODE
09/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/523,972	KADOUCHI ET AL.	
	Examiner	Art Unit	
	Samuel Berhanu	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06/26/2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,6 and 8-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,6 and 8-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 5-6, 8- 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashiguchi (JP Publication number: 62-234878) (Hereinafter Hashiguchi) in view of McCall (US5,994,669) in view of Thomas et. al. (US 2002/0079865) (Hereinafter Thomas).

Regarding Claim 1, Hashiguchi discloses in Figures 1-2, a battery storing device comprising: a battery (8) storing section (1) that can store a battery inside and has a heat retaining function of retaining heat of the battery that is stored inside using heat insulating material (the box is a hermetically-sealed heat-insulated box, see abstract and Claim 1); and a heat retention releasing mechanism (an air flowing door 3) for releasing the heat retaining function, an independent discharge circuit having a heating resistor (6).

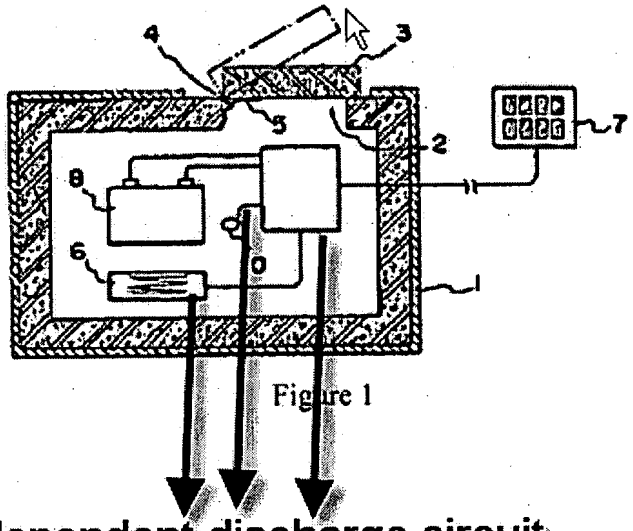

Figure 1

(see figure below)

Wherein the heat retention releasing mechanism (3) opens and closes an opening for making air flow between the inside and outside of the battery storing section (1) (noted that element 2 and 3 is used as a means of air flowing in and out from the box 1, see Abstract). Hashiguchi does not disclose explicitly, said independent discharge circuit is directly coupled to the battery and can perform discharge independently from the charge/discharge operation of a main circuit. However, McCall discloses in Figures 1-4, said independent discharge circuit (heat discharge warmer circuit) is directly coupled to the battery (the warmer (the heater) circuit of McCall is wrappable heating unit that is wrapped around the battery, see Column 3, lines 30-34) and can perform discharge independently from the charge/discharge operation of a main circuit (see Column 1, lines 58-62, Column 3, lines 1-15, and Column 19-34). It would have been obvious to a person having ordinary skill in the art to substitute Hashiguchi's heater with McCall

warming system in order to increases the life of batteries and increases the efficiency and warms the battery only at an elevated level for a short period of time prior to use. Neither Hashiguchi nor McCall discloses a heating resistor increases automatically so that heat generating current stops, and the independent discharge circuit is electrically connected to the battery. However, Thomas disclseos in Figure 44, and paragraph 0193, a heating resistor increases automatically so that heat generating current stops, and the independent discharge circuit is electrically connected to the battery (see below)

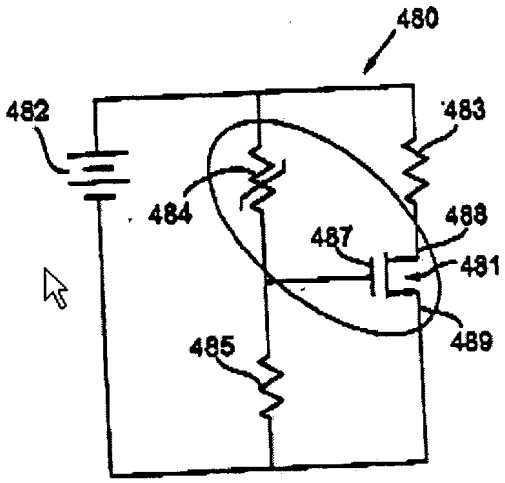

Fig. 44

[0193] In accordance with this aspect of the inventions disclo PTC device 484 is thermally coupled to the FET device 481 as a protection against failure of the FET device 481 in case of ov battery 482. As the voltage across the PTC device 484 and, th device 481, approaches a level that might otherwise cause the fail, current flowing through the PTC device 484 will sufficie device 484 to its trip temperature. Once PTC device 484 trips resistance state, the voltage across the device 484 will immed level below the threshold gate voltage of the FET device 481, to turn OFF.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to use PTC battery temperature control means as taught by Thomas in Hashiguchi 's system to protect the battery by cutting –off the current when excessive current flows through the batteries or when battery temperature rises abnormally.

Regarding Claim 5, Thomas discloses wherein the independent discharge circuit has at least a PTC device

Regarding Claim 6, Hashiguchi discloses in Figures 1-2, a temperature detector (10) for detecting temperature inside the battery storing section. However, McCall discloses in Figures 1-4, a circuit control section for controlling the independent discharge circuit based on the temperature detected by the temperature detector.

Regarding Claim 8, Hashiguchi discloses in Figures 1-2,a heat conductor forming a heat conduction route for conducting heat between the inside and outside of the battery storing section; and a mechanism for opening and closing the heat conduction route (noted that when the door is opened/closed heat is exchanged between the inside and the outside environment)

Regarding Claim 9, Hashiguchi discloses in Figures 1-2, a temperature detector (10) for detecting temperature inside the battery storing section; and heat- retention release control section for controlling the heat retention releasing mechanism based on the temperature detected by the temperature detector (Noted that the door is opened and closed as the temperature inside heat-insulated box deviates).

Regarding Claim 10, Thomas discloses , the battery is a lithium secondary battery

the present inventions. In FIG. 5, a rechargeable battery 1, such as, e.g., a lithium battery with a maximum operating voltage of 4.5 volts is coupled, in

Regarding Claim 11, Hashiguchi discloses a battery storing device (1); and a battery stored in the battery storing device.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashiguchi, in view of McCall and in view of Thomas as applied to claim 1 above, and further in view of Admitted Prior Art (APA).

Regarding Claim 12, Hashiguchi in combination with McCall and Thomas do disclose explicitly, an electrically driven mechanism for being driven by power supply from the power supply device. However, Applicant's disclosure in page 1, line 16 and page 3, lines 6-9, electrically driven mechanism (automobile) driven by power supply (battery) from the power supply device. It would have been obvious at the time of the invention to a person having ordinary skill in the art to use Hashiguchi ei. al. battery in the automobile as taught by APA in order to provide a backup power supply when main energy supply fails to provide power to the engine.

Response to Arguments

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Berhanu whose telephone number is 571-272-8430. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB

KARL EASTHOM
SUPERVISORY PATENT EXAMINER